RADKO. KOMERS

Organosilicon compounds. VI. Determination of silicon in organo silicon compounds. Zdeněk Šír and Radko Komers (Čsl. akad. věd, Prague). *Chem. Listy* 50, 85–93 (1956); cf. *C.A.* 50, 3276g.—The detn. of Si in organosilicon compds. is based on mineralization with a mixt. of fuming HNO_3 and oleum, and on the acidimetric detn. of SiO_2 by the equation: $Si(OH)_4 + 6F^- + 4H^+ = SiF_6^{--} + 4H_2O$. Weigh a sample contg. 3.5–8.5 mg. Si into a Pt crucible contg. 0.5 ml. 20% oleum and 0.1 ml. fuming HNO_3 (special care must be taken in weighing volatile or easily hydrolyzable Si compds. such as alkyl silanes and alkyl halogen silanes which are weighed differentially from a glass capillary). Heat the crucible at first gently on the sand bath, finally ignite over a free flame. Fuse the SiO_2 thus obtained with 0.5–1 g. $NaKCO_3$, digest the melt with cold H_2O, acidify the soln. with 6*N* HCl, boil off the CO_2, add after cooling 6–10 drops of the indicator prepd. by mixing 6 parts of 0.1% alc. soln. of methyl red with 5 parts of 0.1% soln. of bromocresol green to which 0.57 ml. 0.1*N* NaOH for each 100 ml. had been added, neutralize the soln. with 5% NaOH and finally exactly with 0.1*N* NaOH (the vol. must be kept below 50 ml.), sat. the soln. with neutral solid KCl or KNO_3, add 10 ml. exactly neutral 1% soln. of NH_4F, 20 ml. 0.1*N* HCl, and titrate the excess HCl with 0.1*N* NaOH until the red color turns green. One ml. 0.1*N* HCl corresponds to 0.7015 mg. Si. VII. Determination of halogen bound to silicon. *Ibid.* 102–3.—To det. Cl in alkyl- and arylhalogensilanes, suck a sample contg. 8–25 mg. Cl into a weighed thin-walled vial 5–10 mm. in diam., seal the capillary end, weigh the vial, let it sink into a slender cylinder contg. 1–2*N* NaOBu (forming a layer at least 8 cm. high), crush the vial with a glass rod, transfer the liquid into a 250-ml. flask, wash the cylinder with three 3-ml. portions of EtOH, then with H_2O, add 3 drops of 0.1% phenolphthalein, neutralize the soln. with HNO_3 1:1, add 6 more drops of the acid, and titrate the soln. potentiometrically with 0.05*N* $AgNO_3$.

M. Hudlický

RAD'KO, K.I., inzh.

Effect of design of a water seal on its operation. Elek.sta. 28 no.10:28-30 '57. (MIRA 10:11)

(Hydraulic turbines)

RAD'KO, K. I. Cand Tech Sci -- (diss) "Study of water condensation in steam turbines." Sverdlovsk, 1958, 15 pp (Min of Higher Education USSR. Ural Polytechnic Inst im S. M. Kirov. Chair of Thermal ~~Heat and Power Engineering~~ Installations of Electric Power Stations), 100 copies (KL, 11-58, 117)

RAD'KO, K.I., inzh.

Pressure distribution in a water seal chamber. Izv. vys. ucheb. zav.; energ. no. 1:92-96 Ja '58. (MIRA 11:7)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.
(Steam turbines)

RAD'KO, K.I., inzh.

Friction and water consumption in a water gland. Energomashinostroenie 4 no.1:33-35 Ja '58. (MIRA 11:1)
(Packing (Mechanical engineering)) (Steam turbines)

RAD'KO, K.I.

Study of water seals in a steam turbine. Trudy Ural. politekh. inst. no.79:46-58 '59. (MIRA 13:7)
(Steam turbines) (Packing (Mechanical engineering))

VIL'CHITSKIY, Vladimir Vladimirovich; KONONCHUK, Geniy Ivanovich; TITOV, Pavel Il'ich; KHMELEV, Anatoliy Yakovlevich; KOCHETKOV, Nikolay Georgiyevich; RAD'KO, L.I., red.

[Practices of leading workers for all miners] Opyt peredovikov - vsem shakhteram. [By] V.V.Vil'chitskii i dr. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1963. 35 p. (MIRA 17:7)

1. Zamestitel' nachal'nika kombinata Kuzbassugol' (for Vil'chitskiy). 2. Brigadir kompleksnoy brigady shakhty "Berezovskaya-1" kombinata Kuzbass (for Kononchuk). 3. Brigadir kompleksnoy brigady shakhty "Chertinskaya-1" kombinata Kuzbass (for Titov). 4.Brigadir prokhodcheskoy brigady shakhty "Polysayevskaya-2" kombinata Kuzbass (for Khmelev). 5. Brigadir prokhodcheskoy brigady No.3-3-bis tresta Prokop'yevskugol' (for Kochetkov).

RAD'KO, M., inzh.

Over-all mechanization of the livestock section of the "Communist" Collective Farm. Sil'.bud. 9 no.14-15 N '59. (MIRA 13:4)
(Dairy barns) (Farm mechanization)

RAD'KO, M., inzh.

Organization, adoption, and use of ventilating installations in livestock buildings. Sil'.bud. 9 no.5:13-15 My '59. (MIRA 13:3)
(Ukraine--Farm buildings--Heating and ventilation)

GOLOSOV, V., nauchnyy sotrudnik; RAD'KO, M.; IVANOV, K.

Assembly-line method in rural construction. Sel'. stroi. 15 no. 2:5-7 F '61. (MIRA 14:5)

1. Akademiya stroitel'stva i arkhitektury USSR (for Golosov).
2. Glavnyy inzh.Upravleniya po stroitel'stvu v kolkhozakh Ministerstva sel'skogo khozyaystva USSR (for Rad'ko).
3. Nachal'nik Simferepol'skoy mezhkolkhoznoy stroitel'noy organizatsii (for Ivanov).
(Collective farms--Interfarm cooperation)
(Construction industry)

RAD'KO, M., inzh.

A series of building machinery for interfarm building organization units. Sil'. bud. 12 no.1:8-9 Ja '62. (MIRA 16:12)

RAD'KO, M., inzh.

How to calculate the cost of adapting standard designs to local conditions. Sil'. bud. 12 no.5:21-22 My '62.
(MIRA 16:4)

(Farm buildings--Costs)

RAD'KO, M.

Improve the work of Interfarm Building and Planning Organization and business accounting groups. Sil'.bud. 13 no.10:12 O '63. (MIRA 17:3)

1. Glavnyy inzh. upravleniya po stroitel'stvu v kolkhozakh Ministerstva stroitel'stva i zagotovok sel'skokhozyaystvennykh produktov UkrSSR.

PEYVE, Ya.V., akademik, otv. red.; VLASYUK, P.A., akademik, red.; SIROCHENKO, I.A., prof., red.; VOYNAR, A.I., prof., red.; MIKORIK, A.V., kand. biol. nauk, red.; OSTROVSKAYA, L.K., doktor biol. nauk, red.; ZADERIY, I.I., doktor sel'khoz. nauk, red.; KURINNAYA, M.F., dots., red.; KLIMOVITSKAYA, Z.M., kand. biol. nauk, red.; MITSYK, V.Ye., kand. vet. nauk, red.; KAPITANCHUK, V.A., red.; RAD'KO, L.K., red.

[Trace elements in agriculture and medicine; materials] Mikroelementy v sel'skom khoziaistve i meditsine; materialy. Kiev, Gossel'khozizdat USSR, 1963. 689 p. (MIRA 18:1)

1. Vsesoyuznoye soveshchaniye po voprosam primeneniya mikroelementov v sel'skom khozyaystve i meditsine, 4th, Kiev, 1962. 2. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy AN Ukr.SSR (for Ostrovskaya, Vlasyuk). 3. Institut biologii AN Latviyskoy SSR (for Peyve). 4. Kiyevskiy meditsinskiy institut (for Kurinnaya). 5. Donetskiy meditsinskiy institut im. A.M.Gor'kova (for Voynar). 6. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii i biokhimii sel'skokhozyaystvennykh zhivotnykh (for Mitsyk). 7. Belotserkovskiy sel'skokhozyaystvennyy institut (for Zaderiy).

[illegible], P. [Lykhvar', V.F.], kand. sel'skokhoz. nauk, [illegible]
[illegible], V.F., red.

[Maize growing on corn with [illegible] crops for silage] Kukurudza z zernobobovymy kul'turamy na syloss. Kyiv, Derzhsil'hospvydav URSR, 1963. 127 p. (MIRA 17:10)

1. Ukraine. Ministerstvo sel'skogo khozyaystva.

RADIKO, N. I.

Geo

2

Microelements in the mineral waters of the southern slopes of the Soviet Carpathians. A. E. Babinets and N. I. Rad'ko. *Geol. Zhur., Akad. Nauk Ukr.R.S.R.* 16, No. 2, 21–9(1950)(Russian summary).—Spectrum analyses of the principal mineral waters of the Transcarpatian southern slope showed that the largest no. of elements present in trace amts. were found to exist in carbonated waters; all of these waters contained Ba, most of them Sr, Ni, F, B, and I. Cu, Pb, and Ag were found frequently, although only in small amts. Co and Zn were less frequently found, and V, Be, and Zr only very rarely. H_2S-contg. waters, especially the highly mineralized NaCl-contg. waters, are low in microelement content. Most of the microelements were traced to the sedimentary or igneous surrounding rocks. The high I content is attributed to their deposition from sea water. Travertine rocks of the carbonated water sources were investigated. W. M. Sternberg

RAD'KO, N.I.

Gas composition of underground waters in the Transcarpathia Neogene trough. Trudy Inst.geol.nauk AN URSR Ser.gidrogeol.i inzh.geol. no.8: 24-39 '62. (MIRA 15:7)
(Transcarpathia—Water, Underground—Composition)

RAD'KO, N.K.

Role of the olfactory analysor in the burrowing of rodents in search of food. Trudy Inst. fiziol. 6:385-392 '57. (MIRA 11:4)

1. Laboratoriya ekologicheskoy fiziologii (zaveduyushchiy A.D. Slonim).
(SMELL) (RODENTIA)

BUDKO, P.

Device for cleaning the rack of the suction pipe of the dredge. Mech. transp. 21 no.8:41-42 Ag '62. (MIRA 18:9)

1. Komandir-nastavnik Dneprovskogo basseynogo upravleniya vodnogo puti.

Radke, Seidl

Category : CZECHOSLOVAKIA/Nuclear Physics - Structure and Properties C-4
of Nuclei

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5946

Author : Seidl Radko
Inst : [redacted] Institute of Technical Physics of the Czechoslovak Academy of Sciences, Prague, Czechoslovakia
Title : Chekhosl. fiz. zh. 1956, 6, No 2, 199-200

Abstract : Starting with data on the energy liberated during K-capture or during β^+-decay, the author considers the problem of the construction of a shell model of the nucleus. It is proposed that the β transition is carried out by the last particle in the shell. The neutron and proton levels are considered individually. It is stated, that on the basis of the data on the β^+-transition energy for free nucleons, it is possible to construct a scheme for the ground levels of the nuclei. This scheme is in agreement with the experimental data with respect to the stability of the individual isotopes and the values of the nuclear spins. To obtain agreement with the nuclear binding energies and the data on nuclear reactions, it becomes necessary to propose that the transition of each nucleon causes a lowering of the bottom of the potential well of the nucleus.

Card : 1/1

[redacted] Radke, Seidl

Category : CZECHOSLOVAKIA/Nuclear Physics - Structure and Properties C-4
of Nuclei

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5947

Author : Seidl [redacted]
Title : Concerning the Problem of the Systematization of Spectra.

Orig Pub : Ceskosl. casop fys., 1956, 6, No 2, 222-223

Abstract : See Abstract 5946

Card : 1/1

67004

CZECH/37-59-1-10/26

21.5300

AUTHOR: Radko Seidl

TITLE: Influence of the Emission Properties of the Anode on the Characteristics of Geiger-Müller Counters

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 1, pp 60-65

ABSTRACT: We define the counting range such that the lower limit is determined by the condition that each incident slow electron produces a discharge in the counter, while the upper limit is determined by discharges occurring without incident particles. This definition is not the same as that for a plateau. The measurements were carried out on cylindrical counters of 25 mm diameter and 200 mm length. The anode was a tungsten wire of 0.06 or 0.1 mm diameter. The cathode was made of copper inactivated by a layer of tungsten. The counter was filled by a mixture of ethylene at 20 mm Hg and argon at 80 mm Hg. A 5M.ohm limiting resistor was used (Fig 1). Preliminary experiments showed that the properties of the counters rapidly deteriorated during their use. With an increasing number of pulses, the counting range decreased. This was due to the surface properties of the anode. The counters could be regenerated by changing the anode, but not by

= N_k. Near the

end of the counting

. If the anode is

its surface contains only few

this case the end of the counting

ed by a different mechanism. On the other

ng of the counter can reduce the

Card 2/3

Card 1/3

Influence of the Emission Properties of the Anode on the Characteristics of Geiger-Müller Counters

changing the gas filling. The counters could also be partially regenerated by heating the anode either in an oxidizing medium or in vacuum. It was found that by using an external extinction circuit, pulses did not shorten the counting range of the counter. It was further found that the best anodes were prepared by slow oxidation of the tungsten wires such as by first heating the anode in a moderate vacuum and later in air. The observed phenomenon is explained by electron-emission from the anode. The number of false pulses $\dot{N}_e$ is proportional to the number of emission centres ν produced by electrons hitting the anode, to the number of all pulses $\dot{N}$ and to some function of the voltage. Near the upper limit of the counting range $\dot{N}_e = \dot{N} = \dot{N}_k$. From this, we obtain the condition for the end of the counting range (Eq 8); $\varkappa$ is a constant. If the anode is coated by an oxide layer, its surface contains only few electron traps. In this case the end of the counting range is caused by a different mechanism. On the other hand, the gas-filling of the counter can reduce the

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Influence of the Emission Properties of the Anode on the Characteristics of Geiger-Müller Counters

oxide coating on the anode and thereby produce electron traps. This mechanism explains the ageing of the counter independently of the number of pulses, while the first mechanism described accounts for ageing which is dependent on the number of pulses.

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There are 3 figures and 4 references, of which 2 are English, 1 is Soviet and 1 is Czech.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha
(Institute of Technical Physics, Czechoslovak Ac.Sc., Prague)

SUBMITTED: July 7, 1958

4

67020

21.5300 CZECH/37-59-4-7/16

AUTHOR: Radko Seidl

TITLE: On the Properties of Geiger-Müller Counters [19]

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 4, pp 384-399

ABSTRACT: The factors interfering in the fully reliable and reproducible operation of G-M counters will be discussed. Most of the material discussed is a consequence of the experience of this Laboratory, but some results from the literature will also be quoted. The ideal characteristic of a G-M counter contains a plateau (1), has a counting efficiency of 100% and produces one pulse only for each incident particle. We shall first describe the physical phenomena leading to non-ideal characteristics:
(1) Some of the molecules of the gas may have metastable states. While the mean lifetime of an excited state is approximately 10^{-8} seconds, the mean lifetime of a metastable state may be as high as 10^{-2} seconds. This could lead to the emission of a photon long after the working discharge has finished, thereby causing a false pulse.
(2) Electrons may be captured by neutral molecules, thereby forming negative ions. This electronegativity can lead to disturbances which will be discussed later.

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On the Properties of Geiger-Müller Counters

(3) A further disturbing factor is the emission of electrons from the electrodes. Of all the known types of electron emission, mainly Malter effect plays a role. This occurs on the surface of the electrodes by the capture of positive ions on very thin dielectric layers such as aluminium trioxide. A further emission can be the so-called excoelectron emission (Refs 1, 2). This occurs from shallow surface states by thermal excitation. The surface states can become occupied due to irradiation of the electrodes. A similar effect is the chemi-emission (Ref 3). This occurs by chemical reaction of the gas with the surface of the solid e.g. during oxidation.
The described phenomena can lead to disturbances of two kinds: (a) reduction of counting efficiency, and (b) false pulses. Reduction in counting efficiency can be caused by an inhomogeneous electric field. This is usually determined by the geometry of the counter. The presence of electro-negative molecules also reduces the counting efficiency. Free slow electrons collide during their motion towards the anode with electro-negative molecules. Some of these collisions end with the

On the Properties of Geiger-Müller Counters

production of negative ions. These, because of the large mass, have a small mean free path, and therefore the electron which formed them is lost. This effect is mathematically discussed in some detail.
False pulses. The most common type of false pulses are those which occur due to disturbances in the self-quenching mechanism. False pulses further occur due to electro-negative molecules. Some of the photons created during the active stage of the working discharge cause photo-emission on the cathode. The photoelectron may be captured by an electro-negative molecule. By disintegration of the thus formed negative ion, a false pulse can occur. This effect is also discussed in detail.
A further source of false pulses is the emission of electrons from the electrodes. All types of this emission are discussed in some detail.
(c) Ageing of the counter. Two effects of ageing affect the characteristics of the counter. The self-quenching gas changes and the surface properties of the electrodes deteriorate. The gas will change mainly if, after dissociation during deionisation, no spontaneous association occurs. In this case, the number of active molecules will

On the Properties of Geiger-Müller Counters

steadily decrease. Halogens are, therefore, indicated. The deterioration of the surfaces of the electrodes is less serious in counters using halogens than in those using hydro-carbons. The ageing process of the electrodes is, however, a very complex one.

Table 5 shows the characteristics of the false pulses due to the various phenomena. Some of the disturbing effects can be counteracted by external means; others, like chemi-emission and field emission, depend on the material used and the construction of the counter. The means of counteracting these disturbances are discussed in some detail. The main importance of accurate knowledge of all these factors is in applications of the G-M counter where high accuracy is required.

There are 4 figures, 2 tables and 7 references, of which 2 are English, 4 Czech and 1 German.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha (Institute of Tech. Physics, Czechoslovakian Academy of Science, Prague)

SUBMITTED: February 6, 1959

21.5300

67022

AUTHOR: Radko Seidl

CZECH/37-59-4-10/16

TITLE: Automatic Regulation of the Operating Voltage of Geiger-Müller Counters

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 4, pp 417-423

ABSTRACT: In various industrial applications of G-M counters, it is often necessary to adjust the operating voltage in order to follow changes in the level of the plateau. An automatic regulator must consist of two basic parts. One that senses the threshold voltage V_{po} and the other that adjusts the operating voltage V_p. The most efficient sensing method is the measurement of the dependence of the charge passed during an impulse on $(V_p - V_{po})$. In this case, it is sufficient to demand that the regulating part should hold V_p at such a value as to make this charge constant. A further possible principle uses an auxiliary counter working under equivalent conditions as the main counter. The regulator device regulates the voltage in the auxiliary counter to V_{po} and V_p on the working counter is achieved simply by adding a constant voltage to V_{po}. Two of the main

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Automatic Regulation of the Operating Voltage of Geiger-Müller Counters

possible regulating devices are discussed. Fig 1 shows a diagram of a regulator working as an amplitude stabiliser for the counting pulses. Fig 2 shows the diagram of a stabiliser working on the second principle discussed above. The first method has one serious disadvantage. The time constant of the integrating circuit, RC, must be 100 times larger than the longest interval between pulses. Oscillations would otherwise occur. This means that RC must be of the order of 100 seconds, thereby making the response-time of the regulator unacceptably long. Though this difficulty can be overcome, it means considerable complications in the construction. The second method, working basically as a counting rate meter, can be chosen so as to have a time constant of the order of 0.1 seconds. A disadvantage of this method is, however, the necessity to use two counters working in an homogeneous ambient atmosphere. A third method overcomes the main disadvantage of the first while keeping its main advantage. Here, the stabiliser is carried out by a servo-mechanism actuated by a device

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sensing the amplitude of the counting pulse. A block diagram of this arrangement is shown in Fig 4. Fig 5 shows the discriminator levels of this apparatus. There are 5 figures.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha (Institute Tech. Physics, Czechoslovak Academy of Science, Prague)

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SUBMITTED: January 18, 1959

YUL'YANKIN, I., RAD'KO, T.

Milking

Milking cows by machine in the pasture. Kolkh. proiz. 12 No. 6, 1952

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

RADKO, T., Eng.

Windmills

Mechanization of heavy jobs on the farm, Kolkh.proizv. No. 3, 1953

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

RAD'KO, V., inzh.; FEDOROV, A.

Modification of the threshers of RSM-8 and S-6 combines to harvest corn for grain. Tekh.v sel'khoz. 21 no.8:10-18 Ag '61.
(MIRA 14:7)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniya traktorov i sel'skokhozyaystvennykh mashin.
(Combines (Agricultural machinery))
(Corn (Maize)—Harvesting)

STATKEVICH, M., polkovnik; PERSHINA, M., podpolkovnik; RAD'KO, V., podpolkovnik; PANFILENOK, podpolkovnik; SELINA, A., podpolkovnik; NIKONOVA, V., podpolkovnik meditsinskoy sluzhby

Features of rear-echelon support of troops in the mountains. Tyl i snab.Sov.Voor.Sil 21 no.1:33-45 Ja '61. (MIRA 14:6)

1. Ofitsery tyla Zakavkazskogo voyennogo okruga.
(Mountain warfare)

RAD'KO, V.A., kandidat tekhnicheskikh nauk; YAKIMETS, Ye.M., inzhener.

Titrating solutions of potassium permanganate. Elek. sta. 28 no.6: 78 Je '57. (MLRA 10:8)
(Titrimeters) (Potassium permanganate)

KAD'KO, V.A.; YAKIMETS, Ye.M.

Trilonometric determination of manganese in the systems Mn^{2+} - Fe^{3+} and Mn^{2+} - Al^{3+}. Trudy Ural.politekh.inst. no.96:166-175 '60. (MIRA 14:3)

(Manganese--Analysis) (Systems (Chemistry))

RAD'KO, V.A.; YAKIMETS, YE.M.

Trilonometric determination of calcium, magnesium, and manganese present simultaneously. Trudy Ural.politekh.inst. no.96:176-181 '60. (MIRA 14:3)

(Calcium--Analysis) (Magnesium--Analysis) (Manganese--Analysis)

RAD'KO, V.A.; YARIMETS, Ye.M.

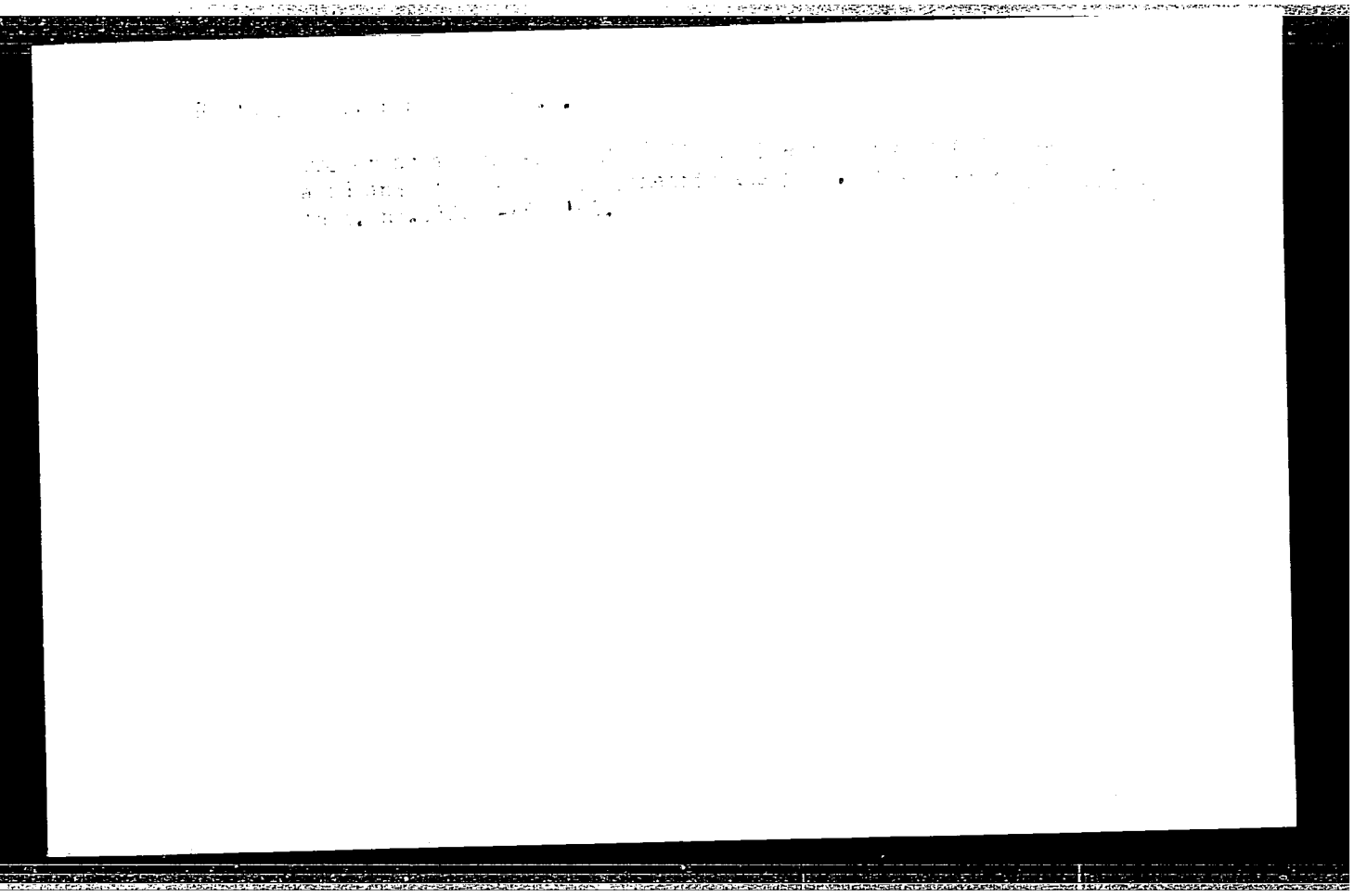
Determination of iron, aluminum, and manganese in metallurgical slags by the use of trilon. Zav. lab. 27 no. 12:1464-1465 '61. (MIRA 15:1)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.
(Iron--Analysis) (Aluminum--Analysis)
(Manganese--Analysis)

RAD'KO, V.A.; YAKIMETS, Ye.M.

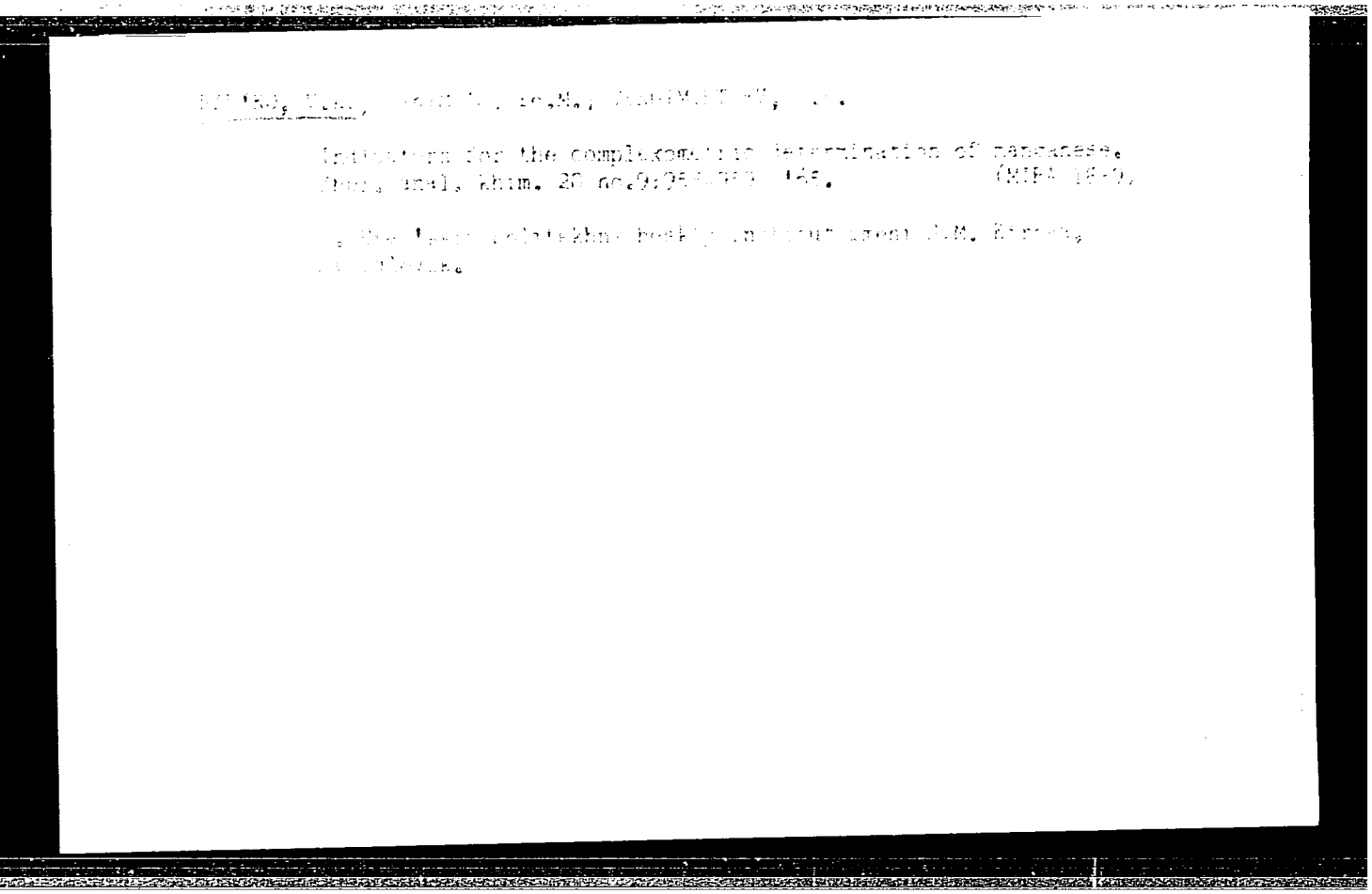
Preparation and properties of the sodium salt of manganese (II) ethylenediaminetetraacetic acid. Zhur.neorg.khim. 7 no.3:683-686 Mr '62. (MIRA 15:3)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.
(Acetic acid) (Manganese compounds)



NIKITIN, V.D.; YAKIMETS, Y.M.; TIMAKOVA, N.A.; RAI'K , V.A.; SHABASHOVA, N.V.; TRIBUNSKIY, V.V.

Preparing chelate compounds of ethylenediaminetetraacetic acid with the cations of certain metals and methods of their analysis. Trudy Ural.politekh.inst. no.130:94-103 '63. (MIRA 17:10)



RAD'KO, V.O., inzh.

Harvesting corn with re-equipped grain combines. Mekh.sil'. hosp. 10 no.7:8-10 Jl '59. (MIRA 12:12)
(Corn(Maize)—Harvesting)
(Combines(Agricultural machinery))

RAD'KO, V.O.; BELOV, A.F. [Bielov, A.F.]

Machine for harvesting legumes. Mekh. sil'. hosp. 12 no. 6:11-12 Je '61. (MIRA 14:5)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniya traktorov i sel'skokhozyaystvennykh mashin.
(Legumes---Harvesting)

RADKO-PAVLAK, MUDr., C.Sc.

Pathogenesis of human brucellosis. Vnitrni lek. 11 no.1:50-58 Ja '65

1. Laborator pro vyzkum anthropozoonos na katedre neurologie University J.E. Purkyne v Brne (reditel - prof. MUDr. K.Popek).

RADKOV, A.

"Mechanization in cutting and the primary processing of wood in low-branched forests; from experiences of the Forest Service in the village of Staro Oryakhovo, Stalin", P. 45, (TEKHNIKA PROMISHLENOST, Vol. 3, No. 4, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

RAD'KOV, A., obshchestvennyy instruktor.

Naval training. Voen.znan. 31 no.11:26 N '55. (MLRA 9:5)
(Naval education)

PHASE I BOOK EXPLOITATION SOV/3295

Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
Institut pretsizionnykh splavov

Pretsizionnyye splavy (Precision Alloys) Moscow, Metallurgizdat, 1960. 208 p.
(Series: Its: Sbornik trudov, vyp. 23) Errata slip inserted. 2,555 copies printed.

Additional Sponsoring Agency: USSR. Gosudarstvennyy planovyy komitet.

Ed.: D.I. Gabrielyan; Ed. of Publishing House: Ye.I. Levit; Tech. Ed.:
Ye.B. Vaynshteyn.

PURPOSE: This book is intended for engineers and scientific personnel in the metallurgical, instrument-production, and electrical-equipment industries, as well as for industrial personal engaged in the production of precision alloys. It may also be useful to students attending advanced technical schools.

COVERAGE: The articles in this collection present the results of investigations conducted in recent years by the Central Scientific Research Institute of Ferrous Metallurgy (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii). The articles deal with industrial techniques of producing soft magnetic alloys, properties and structure of the alloys at extremely low temperatures and in high-frequency magnetic fields, deformation textures, magnetostriction, the galvanomagnetic effect, volume changes, etc. Some articles are concerned with the investigation of deformed hard magnetic alloys. No personalities are mentioned. The articles are accompanied by references, both Soviet and non-Soviet.

AUTHORS: Puzey. I. M., Molotilov, B. V., Rad'kov, A. I. SOV/48-22-10-16/23

TITLE: On Volumetrical Magnetostriction in Iron-Nickel-Molybdenum-Alloys (Ob"yemnaya magnitostriktsiya splavov zhelezo-nikel-molibden)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1251 - 1253 (USSR)

ABSTRACT: A description of various devices used for the following work is to be found in reference 1. Special attention has been paid to the observation of isothermic conditions during the tests. The adiabatic process of magnetisation is known to hinder any adequate measuring of magnetostriction, chiefly owing to the magnetocaloric effect. Nickel has a negative volumetrical magnetostriction, so that its derivative $\partial A/\partial \omega$ is negative too. Thus some amount of nickel should be found on the descending branch of the Bethe curve. (Bete). Any reduction of the intermolecular distance should increase the Curie (Kyuri) point, especially if the average value of

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the variable integral is thereby increasing. That conclusion is corroborated by the measures of the displacement of the Curie point with pressure (Ref 5). Iron has a positive isotheric volumetric magnetostriction, so that iron should be found on the ascending branch of the Bethe curve. After such a coordination some alloys changed the index of volumetrical magnetostriction (alloy 86) or magnetostriction became neutral (alloys 88, 89, 90). Obviously those alloys should be found in the maximum area of the Bethe curve. Alloys involving a (modified) index in connection with thermal work should be found near the zero lines of the linear magnetostriction (Ref 1). Molybdenum-permalloy lies away from those lines. Its index of volumetrical magnetostriction remains unchanged. Furthermore the magnetostriction scarcely changes its magnitude in passing from the tempered to the annealed state. There are 3 figures, 1 table, and 5 references, 2 of which are Soviet.

On Volumetrical Magnetostriction in Iron-Nickel-Molybdenum-Alloys SOV/48-22-10-16/23

ASSOCIATION: Institut pretsizionnykh splavov TsNIIChERMET (Institute for Precision Alloys of the Central Scientific Research Institute for Ferrous Metals)

Card 3/3

RADKOV, A. I.

PHASE I BOOK EXPLOITATION SOV/5526

Vsesoyuznoye soveshchaniye po magnitnoy strukture ferromagnetikov, Krasnoyarsk, 1958.

Magnitnaya struktura ferromagnetikov; materialy Vsesoyuznogo soveshchaniya, 10 - 16 iyunya 1958 g., Krasnoyarsk (Magnetic Structure of Ferromagnetic Substances; Materials of the All-Union Conference on the Magnetic Structure of Ferromagnetic Substances, Held in Krasnoyarsk 10 - 16 June, 1958) Novosibirsk, Izd-vo Sibirskogo otd. AN SSSR, 1960. 249 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fiziki Sibirskogo otdeleniya. Komissiya po magnetizmu pri Institute fiziki metallov OFMN.

Resp. Ed.: L. V. Kirenskiy, Doctor of Physical and Mathematical Sciences; Ed.: R. L. Dudnik; Tech. Ed.: A. F. Mazurova.

PURPOSE: This collection of articles is intended for researchers in ferromagnetism and for metal scientists.

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Magnetic Structure (Cont.) SOV/5526

COVERAGE: The collection contains 38 scientific articles presented at the All-Union Conference on the Magnetic Structure of Ferromagnetic Substances, held in Krasnoyarsk in June 1958. The material contains data on the magnetic structure of ferromagnetic materials and on the dynamics of the structure in relation to magnetic field changes, elastic stresses, and temperature. According to the Foreword the study of ferromagnetic materials had a successful beginning in the Soviet Union in the 1930's, was subsequently discontinued for many years, and was resumed in the 1950's. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

24.2200 (1068, 1160, 1164)
18.8100 4016, 1418, 1555

33574
S/194/61/000/012/069/097
D273/D303

AUTHORS: Puzey, I. M., Lutoshkin, V. M. and Rad'kov, A. I.

TITLE: Investigating the dynamics of domain structure in ul-
trasonic fields

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1961, 14, abstract 12E82 (V. sb. 'Magnitn. struktura ferromagnetikov'. Novosibirsk, Sib. otd. AN SSSR, 1960, 155-164)

TEXT: The influence of ultrasonics on ferromagnetics leads to a relaxation change of domain structures, accompanied by a change of modulus of elasticity and also of velocity of the ultrasound. At relaxation times and large periods of ultrasonic waves, the domain structure does not have any influence on the velocity of the ultrasound. In the case of application of a strong magnetic field, the domain structure is destroyed and the velocity of the ultrasound changes, relative to the sample, to a zero field. There takes place a dispersion of velocity. The passage of ultrasonic pulses through

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33574
S/194/61/000/012/069/097
D273/D303

Investigating the dynamics ...

a cylindrical rod (diameter 16 mm, length 100 mm) of nickel, iron and transformer steel, was studied for different frequencies and different fields. Velocity was measured using an ultrasonic pulse method. Y-cut quartz discs of frequency 1.4 Mc/s were used as transmitter and receiver of ultrasound, and they were smeared with grease or wax on the face in contact with the sample end. The sample was suspended in a solenoid so that it was possible to consider it in a state of free weight. A block-diagram is given of the set-up for the formation and reception of ultrasonic pulses. The pulses are applied to the piezo-quartz transmitter of the sample and are propagated through to the piezo-quartz receiver, and then go through an amplifier and oscillograph. It is established that at '00 Kc/s there is a change in velocity of dispersion of the ultrasound in nickel as the magnetic field increases. In fields up to '000 Э (E) the velocity decreases and then increases. In strong fields there is a slight decrease in velocity, connected with the appearance of microscopic Foucauld currents. For alloys with high electric conductivity, the lowering of velocity of the ultrasound in strong fields was not observed (weak Foucauld currents, relatively smaller magne-

Card 2/3

Investigating the dynamics ...

tostriction). Dispersion curves are drawn for nickel, iron and transformer steel, with measurements not of absolute value of velocity, but of its change on the application of a magnetic field. There is an increase in velocity with one in frequency in the range 16 Kc/s to 3 - 4 Mc/s. For nickel, hardened steel and iron, curves are obtained of the dependence of the damping constants of ultrasound on the value of the magnetic field at frequencies of 100 Kc/s and 1 Mc/s with a maximum damping at the beginning of the curve. Maximum damping and minimum velocity in weak fields are explained by the increased permeability of the submagnetic state. There is obtained the frequency dependence of the damping constant for iron (at a frequency of 180 Kc/s there is a maximum) and for transformer steel (absorption spectrum). 11 figures. 13 references. [Abstractor's note: Complete translation.]

Card 3/3

MOLOTILOV, B.V.; PUZEY, I.M.; RAD'KOV, A.I.

Magnetostriction by change in volume of iron-nickel-molybdenum alloys. Sbor.trud.TSNIICHM no.23:161-165 '60.
(MIRA 13:7)

(Iron-nickel-molybdenum alloys--Magnetic properties)
(Magnetostriction)

S/776/62/000/025/004/025

AUTHORS: Puzey, I.M., Rad'kov, A.I.

TITLE: Investigation of the dispersion of ultrasound in ferromagnetic substances.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no. 25. Moscow, 1962. Pretsizionnyye splavy. pp. 71-85.

TEXT: This experimental investigation deals with the profound effect that the interrelationship between elastic and magnetic phenomena exerts on the passage of ultrasonic (US) waves through ferromagnetics. US affects primarily the domain structure in a manner analogous to a magnetic field, so that there is a displacement of the boundaries between domains. This displacement remains reversible with small amplitudes. The present investigation deals with the dynamics of the action of US on the domain structure, which - because of the absence of any effect analogous to the skin effect of the magnetic field - is considerably more deeply penetrating for the US field than for the magnetic field. The action of the US on the domain structure leads to its relaxational change, a concomitant ΔE effect, and, hence, an alteration of the speed of propagation of the US. When the relaxation time is appreciably greater than the period of the US waves, the domain structure will not exert a sub-

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stantial effect on the rate of propagation of the US waves, that is, in that event, the material will behave as though it were nonferromagnetic. The same occurs if a strong magnetic field is superimposed on a breakdown of the domain structure. Details of the making of the rods (electrolytic Ni 000, Armco Fe, Mo Permalloy, and transformer steel with 4% Si) is detailed. The US tests were made at frequencies from tens of kcps to several mcps in the presence of various MF (up to 10,000 ϕ). The HTof the specimens is identified. A block diagram of the testing equipment is shown, and typical oscillograms, depicting the interference pattern under "in-phase" and "counterphase" conditions, are shown. In all of the materials investigated a velocity minimum and a damping maximum of the US waves was observed in the initial region of the fields which, apparently, corresponds to a magnetization of 30-50% of the saturation value. This effect is attributed to a more ready mobility of the domain boundaries upon the imposition of a magnetic field. When the field eliminates their resistance to motion, the permeability of the material increases sharply. This occurs in all ferromagnetics. A decrease of the speed of US in Ni in the region of strong fields is attributed to the appearance of macroscopic circular Foucault currents. This hypothesis is discussed in some detail. As expected, there is a damping maximum at a certain critical frequency which in Fe appears at 180 kcps and in Permalloy at 20 kcps. Another critical frequency is found for the maximum of magnetic losses in a variable magnetic field.

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* HT : Abbreviation for heat treatment.

This frequency must coincide with the critical frequency of the damping of the US waves, since both of them are a result of the relaxational characteristics of the displacement of the domain boundaries, regardless of the nature of the force under the effect of which this displacement occurs. A great difficulty encountered was the complexity of the spectrum of proper frequencies of the rods employed in the experiments, the mathematical theory for which does not admit any exact expression. This difficulty was overcome by measuring not the absolute speed of the US waves, but its changes with the imposition of a magnetic field at various frequencies, a procedure which afforded a possible determination of the dispersion curves. The absolute speed is then determined by adding the speed in a magnetic field at the basic frequency of a rod and the speed produced by the effect of the given magnetic field. Other difficulties occurred with the broadening of the resonance lines, which reduced the resolving power of the method. There are 15 figures and 11 references (8 Russian-language Soviet, 1 German, and 2 English-language).

L 02991-67 FWT(m)/FWP(t)/ETI IJP(c) MJW/JD/JG 1 7

ACC NR: AP6033155 SOURCE CODE: UR/0105/66/000/010/0082/0083 77 B

AUTHOR: Gorina, N. B.; Gruznov, Yu. A.; Kolobanov, V. V.; Materin, V. I.; Prokoshin, A. F.; Rad'kov, A. I.; Sokolov, V. I.; Trat'yakov, B. N.; Fedotov, L. N.; Khromov, S. M.; Kuleshov, V. F.

ORG: Central Scientific Research Institute of Ferrous Metallurgy im. I. P. Bardin (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: The 65BT superconducting alloy

SOURCE: Elektrichestvo, no. 10, 1966, 82-83

TOPIC TAGS: superconducting alloy, superconductivity

ABSTRACT: A new, relatively low cost Nb-Ti based alloy, designated 65BT, which meets all the major requirements for superconductors has been developed. Because of its properties it can be used in 1) magnetizing devices, such as superconducting solenoids, for field strengths varying from 20 to 80 koe, and 2) wires 0.1—0.3 mm in diameter and up to 12,000 m long and tapes 5 μ thick. The alloy, which contains 65% niobium, 25% titanium, and several other components, is produced in

Card 1/2 UDC: 537.312.62

L 02991-67
ACC NR: AP6033155

an arc furnace and, after thermal processing, is cold drawn. For use in superconducting solenoids, the alloy requires a 0.02—0.05-mm copper coating. Orig. art. has: 1 table.

SUB CODE: 20/ SUBM DATE: none/ ATD PRESS: 5099

awm

Card 2/2

RADKOV, DIMITOR

L.

BULGARIA/Meadow Cultivation.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 95891

Author : Radkov, Dimitor
Inst :
Title : Improvement of Pastures by Means of Enclosing Sheep.

Orig Pub : Selskostop. misol. 1957, 2, No 11, 674-678

Abstract : No abstract.

Card 1/1

RAD'KOV, F. K.

RAD'KOV, F. K.: "The use of nomograms in determining the real values of angles on a complex diagram." Min Higher Education USSR. Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Sciences)

Knizhnaya letopis', No 39, 1956, Moscow.

RAD'KOV, F. K., Cand of Tech Sci — (diss) "TheUse of a Nomogram for Determing the Exact Measurements of Angles in a Complex Drawing," Moscow, 1959, 9 pp (Moscow Aviation Institute im Sergo Ordzhonikidze) (KL, 4-60, 120)

RAD'KOV, F.K., starshiy prepodavatel'

Use of nomograms in determining the true values of angles by their projections. Trudy MIIGAIK, no.36:93-108 '59.
(MIRA 13:4)

1. Kafedra obshchego mashinostroyeniya Moskovskogo instituta inzhenerov geodezii aerofotos" yemki i kartografii.
(Nomography (Mathematics)) (Goniometry)
(Geometry, Descriptive)

RAD'KOV, P.K., kand.tekhn.nauk

New state standards for drawings in the machinery industry. Vest.mash. 40 no.9:79-80 S '60. (MIRA 13:9)
(Mechanical drawing--Standards)

RAD'KOV, F.K.

Standardization of drawings in construction. Standartizatsiia 28 no.8:58-59 Ag '64. (MIRA 17:11)

RADKOV, I.
"Utilization of the upper turning method in cultivating [illegible] lands" (p.104)
GORSKO STOPANSTVO
(Upravlenie na Gorskoto Stopanstvo Kum Ministerskiia Savet) Sofiya Vol 10 No 1 Jan 1954

SO: East European Accessions List Vol 3 No 7 Aug 1954

RADKOV, I.

"Possibility of Organizing a Forest Enterprise for Production of Pitwood from Forests of Low-Limbed Oak in Bulgaria." p. 179, Sofiya, Vol. 10, no. 4, Apr. 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

BULGARIA / Forestry. Biology and Typology of the Forest. K-1

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24846.

Author : Radkov, Iliya N.; Marinov, Marin D.
Inst : Not given.
Title : Biological Features of Firs Cultivated in the Leskhoz imeni V. Kolarov (Beglik hollow).

Orig Pub: Izv. Botan. in-t. B"lgar. AN, 1956, 5, 145-189.

Abstract: The leskhoz is situated in the central part of the Western Rhodopes, 1600-1800 m. above sea level. The soil-climatic conditions of the region are described. Pure fir groves (80% of the area) on the northern slopes rise above 1,600 m., while on the southern ones - to the very border of the for-

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BULGARIA / Forestry. Biology and Typology of the Forest.

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24846.

Abstract: est (2,000 m.). Native plantations are characterized by clearly being of all ages, graded slopes, low branch density, and a grouped arrangement of trees, distinguished by pronounced cone-shaped crowns. Natural renewal of the fir groves proceeds very well on the northern slopes and well on the southern ones; at the height of 1850-1900 m., it strongly deteriorates. On the northern slopes, the young trees adapt on the whole to the natural glades with more sparse cover of bilberries and grow very slowly here, developing a great need for light. On the southern slopes, it is arranged under cover of the maternal plantings, avoiding in this way injurious extreme temperatures. Elimination of the mother plantings as a result of fellings, wind or fire does not lead to a change of

Card 2/4

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24846.

Abstract: methods of conducting the main fellings, depending on the altitude location of the plantings. Bib. 10 titles.

Card 4/4

RADKOV, I

Experiments to determine the role of coarse humus in the germination of Spruce seed. p. 60

GORSKO STOPANSTVO. Vol. (12) No. 2, (Feb.) 1956

Sofiia, Bulgaria

So. East European Accessions List Vol. 5, No. 9 September, 1956

MARKOV, I.

MARKOV, I. Basic types of forests in the coniferous forests on the north ridges of the Vila Mountains. p. 241.

Vol. 12, No. 6, June 1956.
GORSKO STOPANSTVO
AGRICULTURE
Sofiia, Bulgaria

So: East European Accession, Vol. 6, No. 2, February 1957

RADKOV, I

"Aiding the reforestation of the oak forests on the Eastern Balkan Mountains."

p. 295 (Gorsko Stopanstvo. Vol. 13, no. 7, Sept. 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7. No. 2,
February 1958

RADKOV, I; MARINOV, M.

Management of the spruce plants according to their natural growth in the V. Kolarov Forest Service. p. 59.
(GORSKO STOPANSTVO, Vol. 13, no. 2, Feb 1957, Sofia, Bulgaria.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 12, December 1957 Uncl.

Country : BULGARIA
Category : Forestry. Forest Management.

Abs Jour : RZhBiol., No 6, 1959, No 24725

Author : Radkov, I. N.; Minkov, Io.
Inst :
Title : Assistance in the Restoration of Oak Forests in the Eastern Stara Plain.
Orig Pub : Gorsko stopanstvo, 1957, 13, No. 295-303

Abstract : Measures, directed towards the assistance of natural regeneration, were examined; the experience of certain forestries is presented and technical recommendations are given. At the development of measures, securing the regeneration of the oak, it is recommended to take into consideration the fact that the present composition of oak forests is fixed under the

Card : 1/2

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Category : BULGARIA
Forestry. Forest Management.

Abs Jour : RZhBiol., No 6, 1959, No 24725

Author :
Inst :
Title :

Orig Pub :

Abstract : influence of the economy's activity. Primarily, linden, ash, hornbeam, elm, beech, wild cherry, aspen, platan and other species were noticed to have taken great participation in its composition; together with oak they formed stable and productive plantations. It is recommended to return to the composition of the forrests the above-mentioned species, using them as a speed-up for the oak. -- G. V. Grigor'yev

Card : 2/2

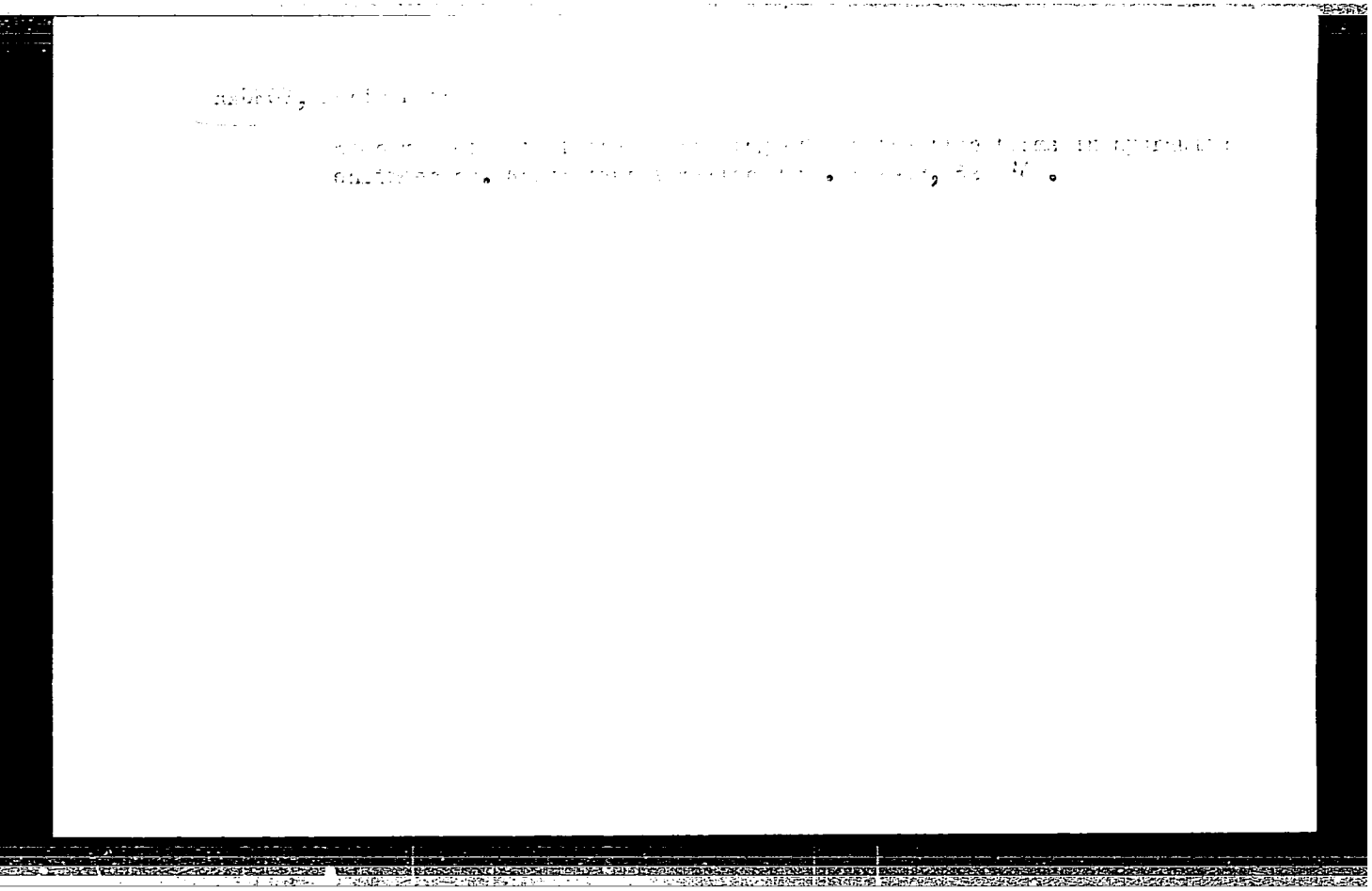
RADKOV, Iliia N. d-r. inzh.

Old ore mining in the Rila Mountains and its influence on the forests. Prir i znanie 13 no.5:18-21 My '60. (EEAI 9:11)
(Bulgaria--Ores)
(Bulgaria--Forests and forestry)
(Rila Mountains)

RADKOV, M.

A case of aplasia of the bile ducts and biliary cirrhosis of the liver in an infant. Suvr. med. 13 no.7:34-35 '62.

(LIVER CIRRHOSIS) (BILE DUCTS)
(GALLBLADDER) (ABNORMALITIES)



[redacted]DKOV, [redacted].

"First experience in the cultivation of Larch (Larix europae) in Bulgaria.", p 397, (GORSKO STOPANSTVO, Vol 8 #9, Nov 1952 , Bulgaria)

East European Vol 2 #8
SO: Monthly List of [redacted] Accessions, Library of Congress, August 1953, Uncl.

[redacted], [redacted].

"Results of the Utilization of Cleared Land in Coniferous Forests of the Northern Side of the Stalin Section of the Rila Mountains." p. 393. (GORSKO STOPANSTVO, Vol. 9, no. 3, Nov. 1953. Sofiya, Bulgaria.)

No: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954; Unclassified

RADKOV, Stefan N.

Treatment of trichomonal colpitis. Akush. i gig. 33 no.2:83-84 Mr-Ap '56. (MLRA 9:7)

1. Iz akushersko-ginekologicheskoy bol'nitsy goroda Stalin (Bolgariya) (glavnyy vrach Georgi Stefanov)
(VAGINA--DISEASE) (TRICHOMONIASIS) (DDT (INSECTICIDE))

RAD'KOV, V. T.

Law - History and Criticism

The question of the stability of the law. Izv. AN SSSR. Otd. ekon. i prava. no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED

[illegible], Va[illegible] Pro[illegible]f'yevich

[illegible]
105.2
.R1

SOTSIALISTICHESKAYA ZAKONNOST' I A STRAZHE PRAV GRAZHDAN SSSR (SOCIALISTIC LAW ON GUARD FOR THE RIGHTS OF THE CIVILIANS OF THE USSR) MOSCOW, GOSYURIZDAT, 195[illegible]. 65 P. (NAUCHNO-POPULYARNAYA YURIDICHESKAYA LITERATURA. BIBLIOGRAPHICAL FOOTNOTES.

L 5028-66 EWT(m)/EWP(w)/EWA(d)/T/EnP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)
ACC NR: AP5022379 MJW/JD/HW SOURCE CODE: UR/0136/65/000/009/0067/0071

AUTHOR: Kozlovskaya, V. P.; Bavykina, I. M.; Rad'kova, R. N.

ORG: none

TITLE: Mechanical properties and structure of cold-extruded aluminum-alloy tubes and bars

SOURCE: Tsvetnyye metally, no. 9, 1965, 67-71

TOPIC TAGS: aluminum alloy, alloy extrusion, extrusion, alloy tube, alloy bar, tube extrusion, bar extrusion, alloy mechanical property

ABSTRACT: The feasibility of cold extrusion of aluminum alloy tubes and bars has been investigated. AD1, AV, D1, and D16 alloy tubes 9, 8, or 7.2 mm in diameter, with respective wall thickness of 1.5, 1, or 1.1 mm, were cold extruded from hot extruded shells, at extrusion ratios of 14.2, 23.3, or 40. The mechanical properties of tubes 300—400 mm long were roughly equal to those of tubes produced by conventional methods (hot extrusion and cold rolling). For instance, cold-extruded D16 alloy tubes after heat treatment had a tensile strength of 43—50 kg/mm^2, a yield strength of 26 to 38 kg/mm^2, and an elongation of 14—20%, compared to 42 kg/mm^2, 26 kg/mm^2, and 14%, respectively, for conventionally made tubes. The mechanical properties of cold-extruded AV and D1 alloy tubes 1500 mm long decreased toward the rear end (a result of grain coarsening), but not below the values required by specifications. Cold-ex-

Card 1/2 UDC: 669.715-126:621.78

L 5028-66

ACC NR: AP5022379

truded D1 alloy tubes 16 mm in diameter and 1500—2000 mm long, tested in the as-extruded, annealed, and heat-treated conditions, were found to have technological properties (in bending, expanding, and squeezing tests) similar to those of conventionally made tubes, but a somewhat lower tensile strength (by 1 kg/mm^2) and yield strength (by 3 kg/mm^2) and a 5% higher elongation. An insignificant anisotropy of mechanical properties was observed in cold-extruded V96 alloy tubes tested in the as-extruded condition. The AD1, AV, and D16 alloy bars 30, 25, 18, or 16 mm in diameter cold extruded at extrusion ratios of 7, 10, 19, or 24 had better mechanical properties than those of bars produced by conventional methods; σ_{13}, $\sigma_{0,2}$, and σ were 40 kg/mm^2, 26 kg/mm^2, and 12%, respectively. Orig. art. has: 3 figures and 4 tables. [WW]

SUB CODE: MM/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4132

Card 2/2

KOZLOVSKAYA, V.P.; BAVYKINA, I.M.; RAD'KOVA, R.N.

Mechanical properties and structure of cold extruded aluminum alloy tubes and bars. TSvet. met. 38 no.9:67-71 S '65. (MIRA 18:12)

MAKAROV, [illegible]., [illegible], [illegible]

Determining minor concentrations of hydrogen sulfide in [illegible]ating industrial eudiometers for hydrogen sulfide. Izm. tekh. no.6:30-32 My '61. (MIRA 1[illegible])

CZECHOSLOVAKIA

RADKOVSKY, J; SVANDOVA, E.

Prague

Prague, Veterinarstvi, No 4, 1963, pp 169-180

"Statistical Evaluation of Tuberculin Tests in Cattle."

SAZHINOV, Viktor; KUPRIYANOV, Aleksey; MAKARTSEV, Ivan; VOROBEY, Aleksandr; DEMENKOVETS, Nikolay; MURASHKO, Petr; KULINKOVICH, Aleksandr; TULUYEVSKIY, Ivan; RADKOVSKIY, Leonid

Our experience in the operation of the BPF-2 pneumatic combine. Torf. prom. 40 no.4:5-12 '63. (MIRA 16:10)

1. Mokeikha-Zybinskoye torfopredpriyatiye Yaroslavskoy obl. (for Sazhinov, Kupriyanov). 2. Torfopredpriyatiye "Bol'shevik" Soveta narodnogo khozyaystva BSSR (for Makartsev). 3. Torfopredpriyatiye Vasilevichi II Soveta narodnogo khozyaystva BSSR (for Vorobey, Demenkovets). 4. Torfobriketnyy zavod "Ubyazh" (for Murashko, Kulinkovich, Tuluyevskiy). 5. Torfobriketnyy zavod "Berezinskoye" (for Radkovskiy).
(Peat machinery)

25(1), 28(1), 32(2) SOV/118-59-9-9/20

AUTHORS: Radkovskiy N.A., Engineer, and Ivanov M.I and Kishinskiy M.I., Candidates of Technical Sciences

TITLE: Mechanization of Snow-Ice Road Building

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, 1959, Nr. 9, pp 37-41 (USSR)

ABSTRACT: Most of the timber cutting regions are notable for their snowy winters when snow lies over 5-6 months in a year, 50-60 cm high. On the other hand, the vast boggy areas often encountered in these regions hinder and sometimes make it altogether impossible to transport timber during the summer time. Under these circumstances, the advantages of winter transport become evident, hence the importance of winter road building mechanization. All the outfits for snow-road building applied in the Soviet Union until now (wooden rollers, squares, track cleaners, etc.) were primitive, hand-made devices which did not ensure an adequate functioning of winter roads and required much manual labor for their maintenance. Finally two designs ensuring a high efficiency

Card 1/4

Mechanization of Snow-Ice Road Building

degree and diminishing the volume of labor required for the building and maintenance of winter roads have been worked out and put into operation. One of these devices is an automotive vacuum sprinkler, designed by V.G. Shtarker, another is an assembly for maintaining the road in proper condition, designed by E.Ya.Vitkovskiy. The vacuum sprinkler is a heated, 4 m^3 capacity tank mounted on the automobile ZIL-150 (Fig. 1). At switching to "vacuum", the automobile motor begins to suck the air from the tank, and water from a reservoir enters through a hose into the tank. When the tank is filled, an electric switch connected with a floating device, automatically switches the motor back to "atmosphere" and stops the water entering the tank. The water inlet and outlet attachments, as well as the hose, are heated by exhaust gases; even during the strongest frosts they never freeze and operate faultlessly. The inside of the tank is also heated; as a result, the water temperature never drops below 10° - 14° C. To let the water out, the dri-

Mechanization of Snow-Ice Road Building

ver opens the water outlet by means of a special lever placed in his cabin. Water comes out on a tray and is distributed along the entire width of the stretch which must be covered with ice. The water lifting height is 3 to 5 m, which is sufficient for taking it from natural sources. At the Bortomskaya single-track ice road in the Komi ASSR, efficiency of such a sprinkler was 64 m^3 a day. The assembly for road maintenance is shown in Fig. 2. It comprises, on the whole, a scraper, a wire brush and a fan which consecutively clean the track. Simultaneously with the cleaning, the assembly does road levelling by removing the surplus snow from the track. Application of such an assembly in the Arkhangel'skaya oblast' has permitted keeping a road in good condition without using any trackmen, while formerly it was required to keep a worker for every 1-2 km of the road. To decrease labor expenditure and the cost of building and maintenance of winter roads, they are built by means of snow compacting; particularly it applies to such roads where the traffic is limited. In order to intensify the process of compacting, a special assembly was designed (Fig. 3). It consists of three units: a device in the

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form of a quickly rotating cutter for loosening the snow, an attachment for heating the snow, and a vibration compacting outfit. The cutter is round in shape, 80 cm in diameter; its peripherial rotation speed varies from 15 to 25 m/sec. The heat energy is introduced into the snow, by burning a liquid oil through the nozzles placed in the upper part of the heat chamber. The compacting device consists of a plate 70 cm long; lifting angle of its front part is 15°-20°; kinetic moment of vibrator debalance varies from 2 to 25 kg/cm; vibration frequency is 4000 oscillations a minute. The assembly is mounted on runners and can be trailed by tractor DT-55 or S-80. 1.5 to 2 km of track 2.2 m wide can be compacted within an hour. There are 3 tables and3 diagrams.

Card 4/4

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